

Anti-mCD3-mIgG2a InvivoFit™

145-2C11-derived recombinant monoclonal antibody against murine CD3ε

Catalog code: mcd3-mab10-1, mcd3-mab10-10

<https://www.invivogen.com/anti-mcd3-migg2a-invivofit>

For research use only, not for diagnostic or therapeutic use

Version 21K08-NJ

PRODUCT INFORMATION

Contents:

Anti-mCD3-mIgG2a InvivoFit™, purified monoclonal antibody (mAb), provided azide-free and lyophilized. It is available in two pack sizes:

- 1 mg
- 10 mg

Target: Murine CD3ε (aka T-cell surface antigen T3/Leu-4 epsilon chain)

Clone: 145-2C11-derived

Sequence: ~65 % of mouse origin (constant region)

Source: Chinese hamster ovary (CHO) cells

Isotype: Murine IgG2a (mIgG2a)

Light chain type: Kappa

Purification: Affinity chromatography with protein A

Formulation: 0.2 µm filtered solution in 150 mM sodium chloride, 20 mM sodium phosphate buffer with 5% saccharose

Administration: Suitable for parenteral delivery in mice

Applications: ELISA; Flow cytometry; *in vivo* depletion

Antibody resuspension (2 mg/ml)

Note: Ensure you see the lyophilized pellet before resuspension.

Resuspend Anti-mCD3-mIgG2a InvivoFit™ with sterile water:

Add 500 µl to 1 mg or 5 ml to 10 mg

Storage and stability

- Product is shipped at room temperature. Store lyophilized antibody at -20 °C. Lyophilized product is stable for at least 1 year.
- Reconstituted antibody is stable for 1 month at 4 °C and for 1 year at -20 °C. Avoid repeated freeze-thaw cycles.

Quality control

- Binding of Anti-mCD3-mIgG2a InvivoFit™ to mCD3 has been confirmed using Flow cytometry.
- Antibody binding has been validated by ELISA using a coated mouse CD3ε protein.
- The complete sequence of the antibody construct has been verified.
- <5% aggregates (confirmed by size exclusion chromatography).
- Anti-mCD3-mIgG2a InvivoFit™ is guaranteed sterile and its endotoxin level is <1 EU/mg (determined by the LAL assay).

BACKGROUND

The cluster of differentiation 3 (CD3, formerly named T3) is a multimeric protein complex consisting of four polypeptides (CD3ε, CD3γ, CD3δ, and CD3ζ) that assemble as three dimers (εγ, εδ, and ζζ)¹. The CD3 complex is a marker of T cells¹. Upon antigen recognition, the TCR/CD3 complex on T cells triggers downstream intracellular signaling and participates in T cell activation².

1. Chetty R. & Gatter K., 1994. CD3: structure, function, and role of immunostaining in clinical practice. *J. Pathol.* 173(4):303. 2. Smith-Garvin J.E. et al., 2009. T Cell Activation. *Ann. Rev. Immunol.* 27:591. 3. Leo O., et al. 1986. Identification of a monoclonal antibody specific for a murine T3 polypeptide. *PNAS.* 84(5):1374. 4. Belmar N.A. et al. 2017. Murinization and H chain isotype matching of Anti-GITR antibody DTA-1 reduces immunogenicity-mediated anaphylaxis in C57BL/6 mice. *J Immunol.* 198:4502. 5. Nimmerjahn F. & Ravetch J.V., 2005. Divergent immunoglobulin g subclass activity through selective Fc receptor binding. *Science.* 310:1510.

TECHNICAL SUPPORT

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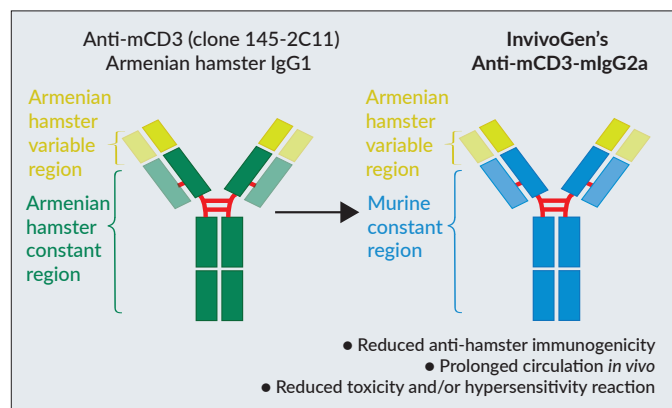
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DESCRIPTION

Anti-mCD3-mIgG2a InvivoFit™ is an anti-mCD3ε mAb featuring the variable region of the previously described armenian hamster IgG1 clone 145-2C11³ and a murinized IgG2a constant region. The 145-2C11 mAb is commonly used for *in vivo* depletion of the T cell population³. Depending on the nature of the experiment, extended treatment schedules (up to several months) may be required. Upon repeated injection of a xenogeneic mAb, mice produce anti-species antibodies, causing removal of the administered mAb from circulation, thereby reducing its *in vivo* efficacy. Moreover, this immunogenicity can lead to fatal hypersensitivity reactions⁴. To overcome such unwanted effects and allow potent antibody-mediated cytotoxic functions, we used recombinant technology to replace the original 145-2C11 armenian hamster constant region with a murine IgG2a format⁵. Anti-mCD3-mIgG2a InvivoFit™ is produced in Chinese hamster ovary (CHO) cells, purified by affinity chromatography with protein A.



RELATED PRODUCTS

Product	Catalog Code
Mouse IgG2a control	bgal-mab10-1
Anti-mCD4-mIgG2a InvivoFit™	mcd4-mab10-1
Anti-mCD8-mIgG2a InvivoFit™	mcd8-mab10-1
Anti-mTIGIT-mIgG2a InvivoFit™	mtigit-mab10-1

For more information visit <https://www.invivogen.com/mouse-anti-mouse-mabs>.